

pattern of features printed or displayed on the photographic mat for use by the processing apparatus 6 in calculating the positions and orientations at which the received images were recorded, and in controlling the first image to be displayed each time the three-dimensional computer model is accessed for viewing.

Camera position and orientation calculator 40 processes the received data defining a plurality of images of the subject object(s) and the printed or displayed photographic mat to calculate the position and orientation of the camera 16 when each image was recorded.

3D model data generator 42 processes the received data defining the images and the data defining the positions and orientations at which the images were recorded to generate data defining a 3D computer model of the object(s) in the images.

View parameter calculator 44 calculates viewing parameters defining how the 3D computer model generated by 3D model data generator 42 should be rendered to generate the first image each separate time the 3D model data is accessed for viewing. View parameter calculator

44 defines the viewing parameters using the coordinate system in which the calibration pattern imaged with the subject object is defined. More particularly, as will be explained below, view parameter calculator 44 defines the viewing parameters so that the first image is generated looking towards the front marker 170 and hence towards the part of the subject object which the user has placed to face the front marker 170.

Image controller 46 controls the viewing access to the data defining the three-dimensional computer model of the subject object in such a way that the first image displayed for each viewing access is an image showing the part of the subject object facing the front marker 170 on the photographic mat 24. More particularly, image controller 46 transmits the data defining the three-dimensional computer model, or a reduced form of the data, as signals 7 to a viewing apparatus connected to internet 8, together with the parameters defining the viewing conditions for the first image generated by view parameter calculator 44. Alternatively, if the remote viewing apparatus connected to internet 8 cannot receive and process 3D data to generate images, image controller 46 processes the data defining the 3D computer model to generate image data which is then transmitted as signals

7 to the remote viewing apparatus. In this case, image controller 46 generates the image data to be transmitted for the first image in accordance with the viewing parameters previously stored and calculated by view parameter calculator 44.

Figure 4, comprising Figures 4a and 4b, shows the processing operations performed by processing apparatus 6 and one of the customer computer processing apparatus 2, 4 in this embodiment. Communication between the processing apparatus 6 and the customer computer processing apparatus is by the transmission of signals 7 over the communication network 8.

Referring to Figure 4, at step S4-2, a customer processing apparatus 2, 4 transmits a request to processing apparatus 6 for a 3D modelling and auction service.

At step S4-4, payment controller 36 of processing apparatus 6 logs the request, and at step S4-6 transmits a signal to the customer processing apparatus requesting payment details, for example a credit card number or identification of an account which the customer holds with the operator of processing apparatus 6.